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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,465	04/02/2001	Masayoshi Hashima	1075.1158 (JDH)	8985
21171	7590	12/14/2004	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			PHAN, THAI Q	
			ART UNIT	PAPER NUMBER
			2128	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/822,465

Applicant(s)

HASHIMA ET AL.

Examiner

Thai Q. Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04/02/2001.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to patent application S/N: 09/822,465, filed on 04/02/2001. Claims 1-22 are pending in this Action.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

The informal drawings are acceptable for examination.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimomura et al, US patent no. 5,838,596.

As per claim 1, Shimomura discloses a method and system for simulating a transport medium in a three dimensional environment with feature limitations very similar to the claimed invention. According to Shimomura, the flexible medium transport simulator includes

Means for setting length and width for a medium for transport as dimensional information in a transport direction (Figs. 2-4),

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Means for setting transport path covering a width-wise deviation of the flexible medium, along which path the flexible medium is transported in the transport mechanism,

A travel amount information input section for inputting travel amount information about an amount of travel of the flexible medium (Figs. 25, cols. 15-16),

A simulation section (26) for simulating the transport of the flexible medium carried out by the transport mechanism, by using a transport mechanism in the simulation means (Fig. 3),

Display means for displaying the transport of the flexible medium,

A display control section (262) for controlling the display so as to display a result of the simulation performed by the simulation section (Fig. 26, col. 16, line 62 to col. 17, line 20, for example),

A position computation section in the simulation section for computing a transport position of the flexible medium along the transport path, a transport plane orthogonal to the transport widthwise direction on the basis of the dimension information, which is set by the transport path setting section, and of the travel amount information, which is input by the travel amount information input section (cols. 15, 16, 18),

And an image preparation section for image data of the flexible medium on the basis of the transport position or plane position from the position computation section, the image preparation section preparing medium position information, and outputting the image data as the result of the simulation (cols. 18-19). Shimomura does not expressly disclose a three dimension image as claimed.

Practitioner in the art at the time of the invention was made would have found sheet transport behavior in real time environment such as sheet flexure, warped sheet, sheet curves, bridges as disclosed in cols. 7-9, col. 17, line 59 to col. 18, line 34, Figs. 27-30, modeling the flexible medium transport implies the three dimensional image of flexible medium transport because such features represent flexible medium in the three dimension.

As per claim 2, Shimomura discloses a pointing device of the input section of the simulation for pointing travel amount information, intervals, points of travel, to the simulation for instance (Figs. 3, 9, cols. 11-12).

As per claim 3, Shimomura discloses pointing devices, an image of transport components such as transport models for control sequences (col. 11, lines 41 to col. 13, line 63).

As per claim 4, Shimomura discloses the claimed limitations for flexible medium transport simulation (col. 16-18).

As per claims 5 and 6, Shimomura discloses travel interval setting means and transport roller, which contacts with transport medium as claimed. Shimomura does not expressly disclose a ratio as claimed. It would have been obvious for those skilled in the art to set a ratio as claimed because simulation system would be able to analyze the behavior of the flexible medium transport as disclosed in Shimomura using the travel ratio set.

As per claims 7 and 8, Shimomura discloses travel setting means for setting travel path, travel interval, conditions of transport path, roller conditions, etc (col. 5, lines

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34-65, for example). This would be obvious that the setting is subject to random distribution or distribution pattern to reflect transport conditions, variant force on transport medium, biasing conditions, etc.

As per claim 9, Shimomura discloses the claimed feature for simulating flexible medium transport.

As per claim 10, Shimomura discloses means for setting transport paths including paths of circular arcs, straight lines, etc.

As per claims 11-12, Shimomura discloses two dimensional flexure, position or posture, weight or load on transport medium, positions of the transport medium, etc. as claimed to analyze medium transport.

As per claims 13-20, Shimomura discloses sheet and flexible medium transport, which would include the claimed limitation as known for those skilled in the art.

As per claim 21, Shimomura discloses a method and system for simulating a transport medium in a three dimensional environment with feature limitations very similar to the claimed invention. According to Shimomura, the flexible medium transport simulation method includes

Means for setting length and width for a medium for transport as dimensional information in a transport direction (Figs. 2-4),

Means for setting transport path covering a width-wise deviation of the flexible medium, along which path the flexible medium is transported in the transport mechanism,

A travel amount information input section for inputting travel amount information about an amount of travel of the flexible medium (Figs. 25, cols. 15-16),

A simulation section (26) for simulating the transport of the flexible medium carried out by the transport mechanism, by using a transport mechanism in the simulation means (Fig. 3),

Display means for displaying the transport of the flexible medium,

A display control section (262) for controlling the display so as to display a result of the simulation performed by the simulation section (Fig. 26, col. 16, line 62 to col. 17, line 20, for example),

A position computation section in the simulation section for computing a transport position of the flexible medium along the transport path, a transport plane orthogonal to the transport widthwise direction on the basis of the dimension information, which is set by the transport path setting section, and of the travel amount information, which is input by the travel amount information input section (cols. 15, 16, 18),

And an image preparation section for image data of the flexible medium on the basis of the transport position or plane position from the position computation section, the image preparation section preparing medium position information, and outputting the image data as the result of the simulation (cols. 18-19). Shimomura does not expressly disclose a three dimension image as claimed.

Practitioner in the art at the time of the invention was made would have found sheet transport behavior in real time environment such as sheet flexure, warped sheet, sheet curves, bridges as disclosed in cols. 7-9, col. 17, line 59 to col. 18, line 34, Figs.

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27-30, modeling the flexible medium transport implies the three dimensional image of flexible medium transport because such features represent flexible medium in the three dimension.

As per claim 22, Shimomura discloses a computer readable recording medium for instructing a computer system for simulating a transport medium in a three dimensional environment with feature limitations very similar to the claimed invention.

According to Shimomura, the flexible medium transport simulation media includes

Code section for setting length and width for a medium for transport as dimensional information in a transport direction (Figs. 2-4),

Codes for setting transport path covering a width-wise deviation of the flexible medium, along which path the flexible medium is transported in the transport mechanism,

A travel amount information input section for inputting travel amount information about an amount of travel of the flexible medium (Figs. 25, cols. 15-16),

A simulation section (26) for simulating the transport of the flexible medium carried out by the transport mechanism, by using a transport mechanism in the simulation means (Fig. 3),

Display means for displaying the transport of the flexible medium,

A display control section (262) for controlling the display so as to display a result of the simulation performed by the simulation section (Fig. 26, col. 16, line 62 to col. 17, line 20, for example),

A position computation section in the simulation section for computing a transport position of the flexible medium along the transport path, a transport plane orthogonal to the transport widthwise direction on the basis of the dimension information, which is set by the transport path setting section, and of the travel amount information, which is input by the travel amount information input section (cols. 15, 16, 18),

And an image preparation section for image data of the flexible medium on the basis of the transport position or plane position from the position computation section, the image preparation section preparing medium position information, and outputting the image data as the result of the simulation (cols. 18-19). Shimomura does not expressly disclose a three dimension image as claimed.

Practitioner in the art at the time of the invention was made would have found sheet transport behavior in real time environment such as sheet flexure, warped sheet, sheet curves, bridges as disclosed in cols. 7-9, col. 17, line 59 to col. 18, line 34, Figs. 27-30, modeling the flexible medium transport implies the three dimensional image of flexible medium transport because such features represent flexible medium in the three dimension.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. US patent no. 3,825,251, issued to Beery et al, on July 1974
2. US patent no. 5,570,280, issued to Nunnally et al, on Oct. 1996
3. US patent no. 6,712,356 B2, issued to Daout et al, on Mar. 2004

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai Q. Phan whose telephone number is 571-272-3783.

5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jean Homere can be reached on 571-272-3780. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dec. 07, 2004



Thai Phan
Primary Examiner
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